



IFW

Docket No.: 13111-00027-US
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Silvia Glück et al.

Application No.: 10/560455

Confirmation No.: N/A

Filed: December 14, 2005

Art Unit: N/A

For: METHOD FOR THE MICROBIOLOGICAL
ISOMERISATION OF ALPHA-HYDROXY
CARBOXYLIC ACIDS

Examiner: Not Yet Assigned

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (IDS)

MS PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

A copy of each reference is attached.

This statement is not to be interpreted as a representation that the cited documents are material, that a search has been conducted, or that no other relevant information exists. Nor shall the citation of any document herein be construed *per se* as a representation that such document is

Application No. Not Yet Assigned
Amendment dated
First Preliminary Amendment

Docket No.: 13111-00027-US

prior art. Moreover, Applicants understand the Examiner will make an independent evaluation of the cited documents.

This Information Disclosure Statement is being submitted before the first Office Action on the merits; accordingly, Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13111-00027-US from which the undersigned is authorized to draw.

Dated: March 23, 2006

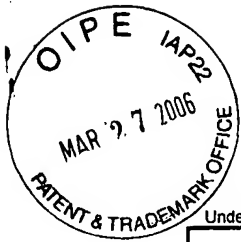
Respectfully submitted,



By _____
Hui-Ju Wu

Registration No.: 57,209
CONNOLLY BOVE LODGE & HUTZ LLP
1007 North Orange Street
P.O. Box 2207
Wilmington, Delaware 19899
(302) 658-9141
(302) 658-5614 (Fax)
Agent for Applicants

454540



Application No. (if known): 10/560455

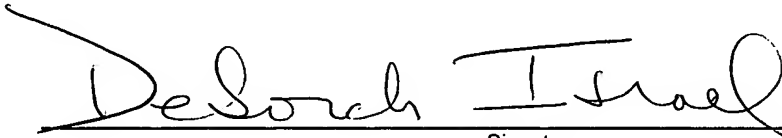
Attorney Docket No.: 13111-00027-US

Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on March 23, 2006
Date


Signature

Deborah Israel

Typed or printed name of person signing Certificate

Registration Number, if applicable

(302) 658-9141
Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Supplemental Information Disclosure Statement (IDS) (2 pages)
IDS (Citation) by Applicant PTO/SB/08a/b (20 References) (2 pages)
Copies of References (20 References)
Postcard



PTO/SB/08a/b (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| | | | | | |
|--|---|----|---|--------------------------|-------------------|
| Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary) | | | | Complete if Known | |
| | | | | Application Number | 10/560455 |
| | | | | Filing Date | December 14, 2005 |
| | | | | First Named Inventor | Silvia Glück |
| | | | | Art Unit | N/A |
| | | | | Examiner Name | Not Yet Assigned |
| Sheet | 1 | of | 2 | Attorney Docket Number | 13111-00027-US |

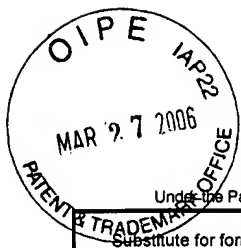
| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner Initials* | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number-Kind Code ² (if known) | | | |
| | | | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|-----------------------|---|------------------|---|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| | | Country Code ³ -Number ⁴ -Kind Code ⁵ (if known) | MM-DD-YYYY | | | |
| | BA | EP-0596466 | 05-11-1994 | Tanabe Seiyaku Co., Ltd. | | |

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

| NON PATENT LITERATURE DOCUMENTS | | | | |
|---------------------------------|-----------------------|---|--|----------------|
| Examiner Initials | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | T ² |
| | CA | Glueck, S. M., et al., "Lactate Racemase As a Versatile Tool for the Racemization of α -Hydroxycarboxylic Acids", Chem. Listy, 2003, Vol. 97, p. 431. | | |
| | CB | Schnell, B., et al., "Enzymatic Racemisation and its Application to Synthetic Biotransformations", Advanced Synthesis & Catalysis, 2003, Vol. 345, pp. 653-666. | | |
| | CC | Liu, S-Q., "Practical Implications of Lactate and Pyruvate Metabolism by Lactic Acid Bacteria in Food and Beverage Fermentations", International Journal of Food Microbiology, 2003, Vol. 83, pp. 115-131. | | |
| | CD | Strauss. U.T., et al., "Deracemization of (\pm)-Mandelic Acid Using a Lipase-Mandelate Racemase Two-enzyme System", Tetrahedron: Asymmetry, 1999, Vol. 10, pp. 4079-4081. | | |
| | CE | Felfer, U., et al., "Substrate Spectrum of Mandelate Racemase Part 2. (Hetero)-Aryl-Substituted Mandelate Derivatives and Modulation of Activity", Journal of Molecular Catalysis B: Enzymatic, 2001, Vol. 15, pp. 213-222. | | |
| | CF | Schafer, S.L., et al., "Mechanism of the Reaction Catalyzed by Mandelate Racemase: Structure and Mechanistic Properties of the D270N Mutant", Biochemistry, 1996, Vol. 35, pp. 5662-5669. | | |
| | CG | Garcia-Viloca, M., et al., "A QM/MM Study of the Racemization of Vinylglycolate Catalyzed by Mandelate Racemase Enzyme", Journal of the American Chemical Society, 2001, Vol. 123, pp. 709-721. | | |
| | CH | Li, R., et al., "Racemization of Vinylglycolate Catalyzed by Mandelate Racemase", Journal of Organic Chemistry, 1995, Vol. 60, pp. 3347-3351. | | |
| | CI | Kenyon, G.L., et al., "Mandelate Racemase: Structure – Function Studies of a Pseudosymmetric Enzyme", Acc. Chem. Res., 1995, Vol. 28, pp. 178-186. | | |
| | CJ | Pearson, W.R., et al., "Improved Tools for Biological Sequence Comparison", Proc. Natl. Acad. Sci. USA, 1988, Vol. 85, pp. 2444-2448. | | |
| | CK | Narang, S.A., "DNA Synthesis", Tetrahedron, 1983, Vol. 39, No. 1, pp. 3-22. | | |
| | CL | Itakura, K., et al., "Synthesis and Use of Synthetic Oligonucleotides", Ann. Rev. Biochem., 1984, Vol. 53, pp. 323-356. | | |
| | CM | Itakura, K., et al., "Expression in <i>Escherichia coli</i> of a Chemically Synthesized Gene for the | | |

| | | | |
|-----------------------|--|--------------------|--|
| Examiner Signature | | Date Considered | |
|-----------------------|--|--------------------|--|



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PTO/SB/08a/b (07-05)
Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| | | | | | |
|---|---|----|---|--------------------------|-------------------|
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary) | | | | Complete if Known | |
| | | | | Application Number | 10/560455 |
| | | | | Filing Date | December 14, 2005 |
| | | | | First Named Inventor | Silvia Glück |
| | | | | Art Unit | N/A |
| | | | | Examiner Name | Not Yet Assigned |
| Sheet | 2 | of | 2 | Attorney Docket Number | 13111-00027-US |

| | | | |
|--|----|---|--|
| | | Hormone Somatostatin, 1977, Vol. 198, pp. 1056-1063. | |
| | CN | Ike, Y., et al., "Solid Phase Synthesis of Polynucleotides. VIII. Synthesis of Mixed Oligodeoxyribonucleotides by the Phosphotriester Solid Phase Method", Nucleic Acids Research, 1983, Vol. 11, No. 2, pp. 477-488. | |
| | CO | Arkin, A.P., et al., "An Algorithm for Protein Engineering: Simulations of Recursive Ensemble Mutagenesis", Proc. Natl. Acad. Sci. USA, 1992, Vol. 89, pp. 7811-7815. | |
| | CP | Delagrave, S., et al., "Recursive Ensemble Mutagenesis", Protein Engineering, 1993, Vol. 6, No. 3, pp. 327-331. | |
| | CQ | Thomas, K.R., et al., "Site-Directed Mutagenesis by Gene Targeting in Mouse Embryo-Derived Stem Cells", Cell, 1987, Vol. 51, pp. 503-512. | |
| | CR | Ebbers, E.J., et al., "Controlled Racemization of Optically Active Organic Compounds: Prospects for Asymmetric Transformation", Tetrahedron, 1997, Vol. 53, No. 28, pp. 9417-9476. | |
| | CS | van Rantwijk, F., et al., "Lipase-Catalyzed Synthesis of Carboxylic Amides: Nitrogen Nucleophiles as Acyl Acceptor", Monatshefte für Chemie, 2000, Vol. 131, pp. 549-569. | |

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

| | | | |
|-----------------------|--|--------------------|--|
| Examiner Signature | | Date Considered | |
|-----------------------|--|--------------------|--|